FINER POINTS

1946 · 65th ANNIVERSARY · 2011
INDUSTRIAL DIAMOND ASSOCIATION OF AMERICA, INC.

"The oldest magazine dedicated solely to the technology and application of superabrasives."

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INTERTECH 2011
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www.intertechconference.com
Hyatt Regency O'Hare
CHICAGO, ILLINOIS
May 2-4, 2011

IDA 65th Annual Meeting

INTERTECH 2011
- Venue
- Education Session
- Organizing Committees
- Call For Papers
- Keynote Speakers
- Registration Forms
- Other Details

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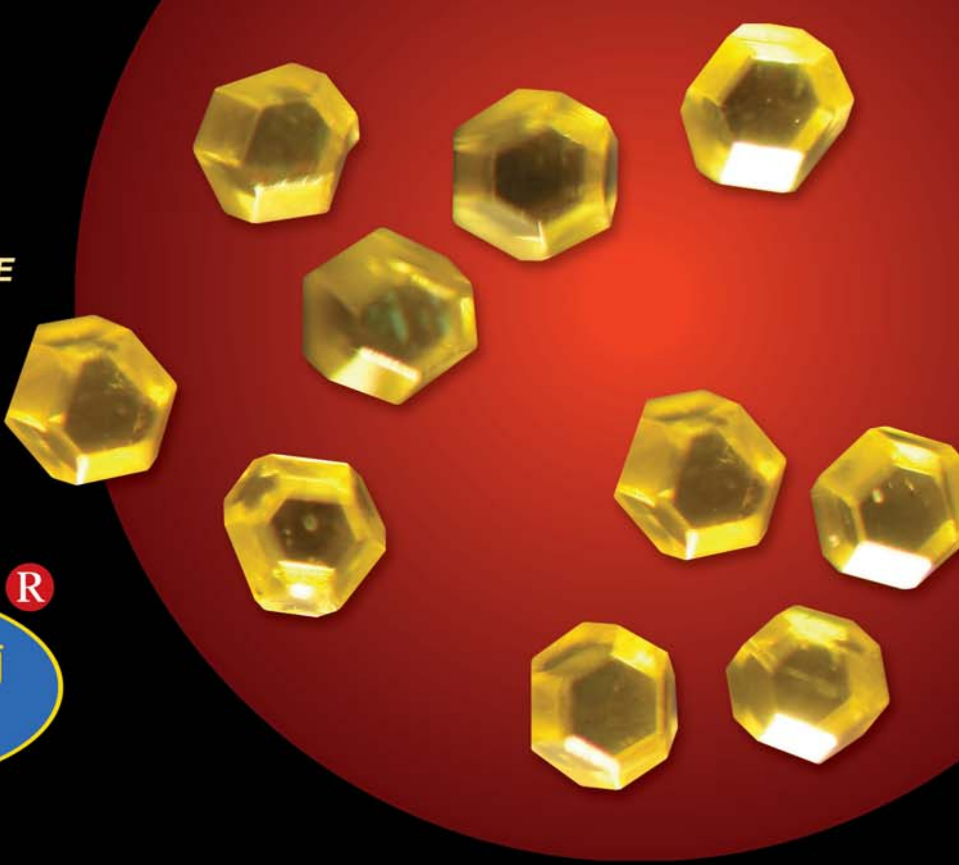

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Photos of Chicago for INTERTECH courtesy of Chicago Convention & Tourism Bureau.

COVER PHOTO

View of downtown Chicago, courtesy of Chicago Convention & Tourism Bureau.

FINER POINTS is the only publication devoted exclusively to the understanding, selection and application of diamond, cubic boron nitride and related materials. It is edited for recipients who are involved in some way with these "superabrasives", either as providers of the materials, producers of products containing the materials or users of these products (e.g., grinding wheels, dressing tools, drill bits, saw blades, sawing wires, cutting tools, polishing compounds, CVD film products, etc.).

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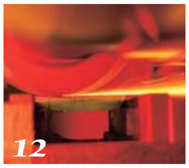
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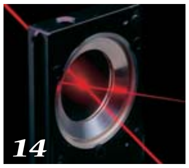
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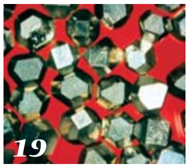
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A Finer Point of View…

First and foremost, I want to offer my prayers for my colleagues and the entire nation of Japan. I pray for the rescue workers and all those in need, may God keep everyone safe.

Putting things in perspective, I realize that the conclusion of my second term as President of the Industrial Diamond Association of America may not seem that important in the grand scale of today. It still has been a privilege to serve as an Officer in what I consider to be the most prestigious organization for the superabrasives industry. I thank my Board of Directors, Officers and the membership for your support throughout my entire time on the Board as an Officer.

Just like a great novel we all end chapters in our lives and begin new chapters. The history of the IDA has been written with a strong emphasis on new technology. The next chapter will focus on education in that technology. This chapter may be the defining moment and what the IDA is to become for future generations. Our member companies represent a great wealth of knowledge and the time has come to share that knowledge …

Successful companies will need to find creative solutions and innovative ways to improve their operations. As I indicated in my last editorial, there is a great need in our industry and that need is education in the proper way. We have dealt with obstacles detrimental to innovation; some are outside our circle of influence like regulations and tax policies that discourage investment. Others are within our control and we have the power to create environments where new ideas can flourish. We can educate our workforce to develop and implement superabrasive technology into their operations that will improve productivity and increase profitability.

PRESIDENT
David L. Edwards

The IDA is about to write its new chapter, we will kick-off our first Educational Session in conjunction with INTERTECH 2011 this May. The course will be taught by leading experts from the IDA and established solely for the purpose of educating attendees, without any commercial influence or individual bias. If you have machine operators, if you have process supervisors responsible for design and implementation of new technologies, if you currently use abrasives or cutting tools in your manufacturing operations, you need to send your workforce to the INTERTECH 2011 Education Session. This is an Education Session that is designed by the IDA to provide basic information about the use of superabrasives and to make every participant "THINK" about how this technology can be applied in their own business. I don't believe there are any other places where you can get this first-hand education covering such a wide variety of superabrasive technologies. More information about the Education Course as well as INTERTECH 2011 is available at www.intertechconference.com and in this issue of Finer Points.

I thank our membership for getting more involved this year and I would like to encourage everyone to get more involved in shaping our industry and this organization. The best way to do that is attend meetings, contribute ideas and become an active IDA Member. Thank you for your continued support and I look forward to seeing everyone in Chicago.

Sincerely,

David Edwards

David L. Edwards, President
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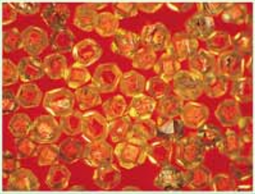

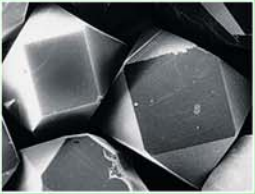

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Don't Miss the Industrial Diamond Association of America's

65th ANNUAL MEETING

April 30-May 1, 2011 • GET ON-LINE NOW TO ATTEND

WHERE: HYATT REGENCY O'HARE, CHICAGO, ILLINOIS ... Register for the meeting and make your room reservations on-line at www.superabrasives.org and click on "2011 Annual Meeting Registration and Information."

WHEN: Saturday April 30 through Sunday May 1, 2011. INTERTECH 2011 starts Monday May 2.

WHAT: Economists, business experts and our own members will interact with attendees to help improve business operations, increase profitability and share information and experiences.

- Meet your Officers and Board of Directors ... Make your voice heard! Together we are much better ...
- Important discussions on Association projects and programs
- Review of plans and preparations for INTERTECH 2011
- Planning of INTERTECH 2013 at Baltimore Harbor, Maryland!
- Network with members to share experiences and express ideas
- Enjoy the location ... Chicago's Hyatt Regency O'Hare
- Great activities – golf and terrific sightseeing will compliment our strong business program. There will be plenty of time to interact and spend that quality one on one time at this exciting venue.

WHY: The Annual Meeting is the one time and place you can get together with colleagues, customers, competitors, and friends to discuss issues and make plans to improve your individual business and grow our collective industry. Your voice is more important now than it has ever been!

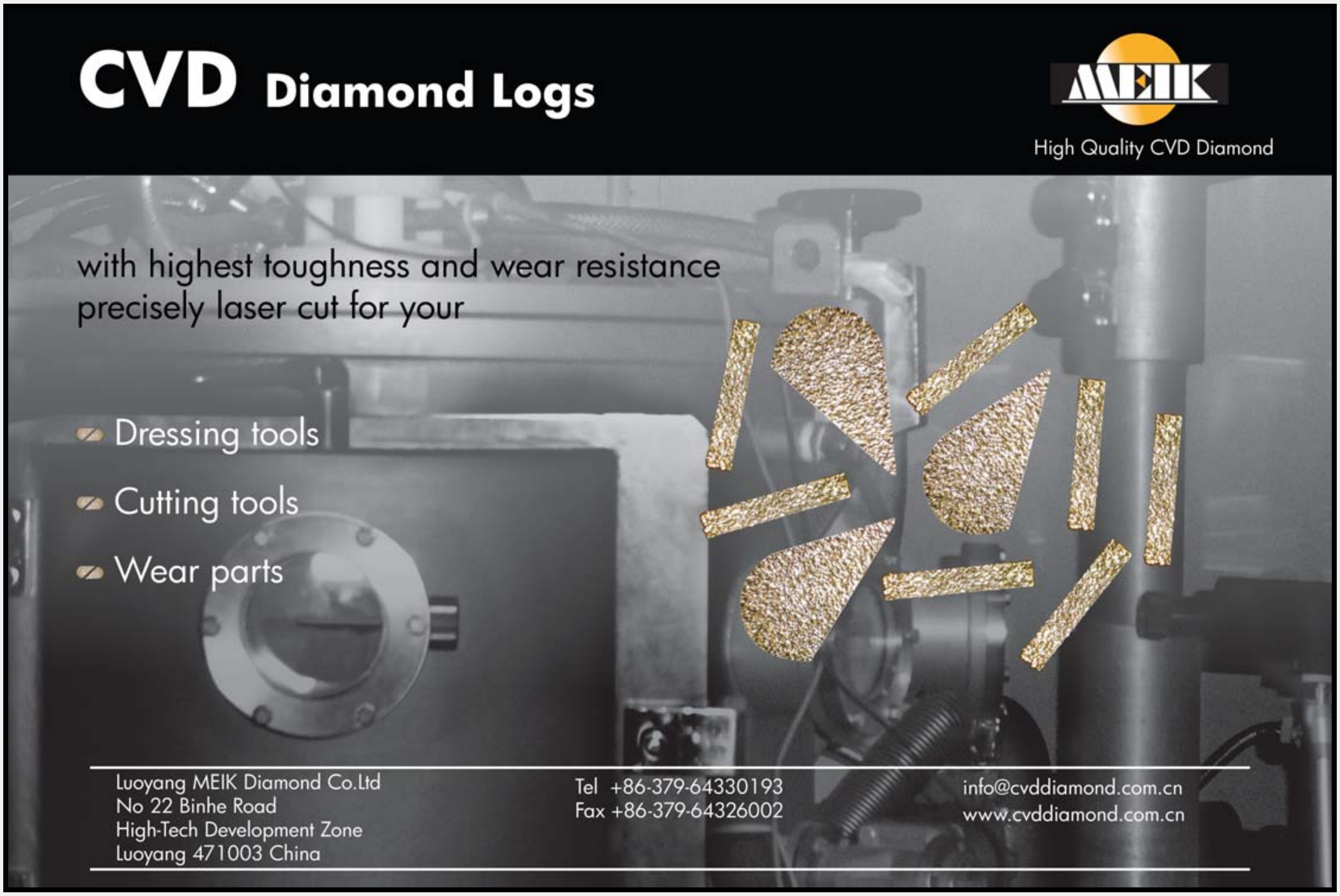
GREAT PROGRAM:

Business Meeting agenda and details on the IDA website at: www.superabrasives.org We will also have outstanding business presentations:

- GINA MARTIN ADAMS, CFA, Wells Fargo Securities, LLC Institutional Equity Strategy – Ms. Adams will provide an economic review and discuss the current global economy in light of recent events with projections on what the economy will do the rest of 2011 and into 2012. Ms. Adams has provided our members with outstanding economic reviews and members request her as a featured speaker every year.
- EDWARD C. JEPSON, Jr., Esq., Vedder Price Labor and Employment Group – Is the current legal advisor for Personnel Policies and Practices and provides recommendations and guidance on Human Resource issues. Mr. Jepson will speak on current employee legal issues impacting Human Resource Managers and companies.
- CHRISTINE PAVALON, PGi, Collaboration Technology Specialist, Premier Global Services, Inc. – At the request of IDA Members Ms. Pavalon will provide Membership with the possibilities for on-line meetings, virtual collaboration, webinars for on-going education and conferencing solutions. Ms. Pavalon will take members through the details of organizing, production and the costs involved in the entire experience.

Enjoy the President's Reception and Annual Banquet ... There will be great food and some honored guests!

WHAT WILL YOU MISS IF YOU DON'T TAKE THE OPPORTUNITY IN CHICAGO?



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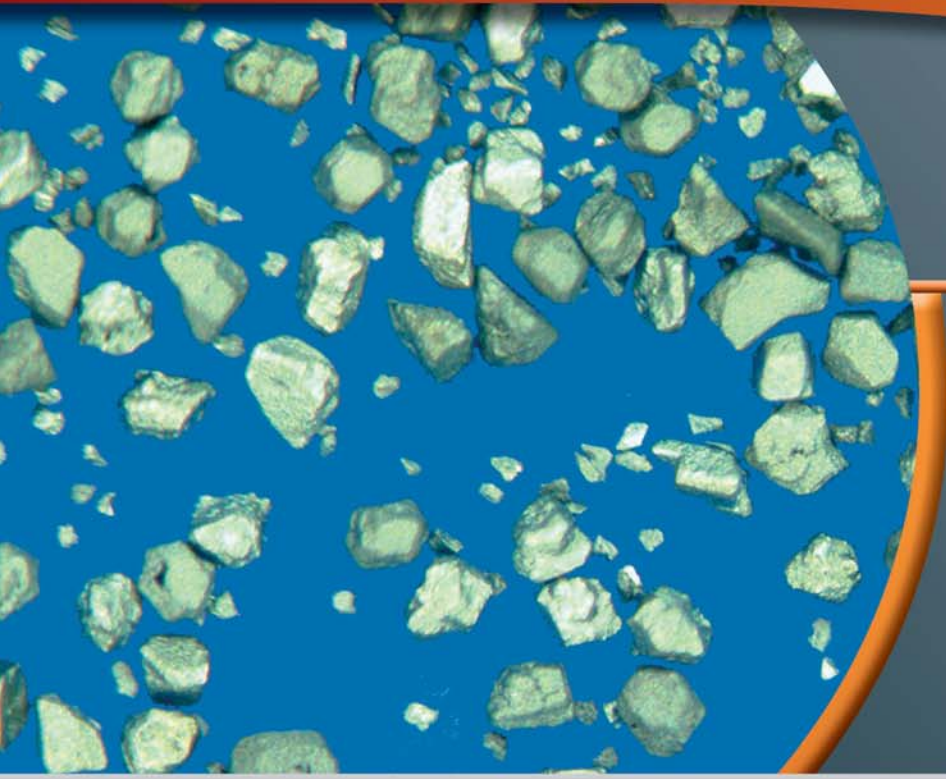

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INTERTECH 2011 Venue http://www.ohare.hyatt.com/hyatt/hotels/index.jsp

INTERTECH 2011 is May 2, 3 & 4, 2011 at The Hyatt Regency O'Hare, Chicago USA

The Chicago O'Hare has long been the standard among Chicago hotels and in 2011 it becomes home to **INTERTECH 2011** the International Conference on Diamond, Cubic Boron Nitride and related materials.

This Conference historically has been a global premier event, bringing together companies and research organizations to share new technology and application development for all superabrasive and ultra-hard materials ... Nowhere else can attendees obtain such diverse technical knowledge and interact with leading scientists and corporate innovators to discuss issues related to high pressure/high temperature research, high temperature low pressure research, tool development, new markets, industry innovations, workpiece materials, superabrasive/ultra-hard applications and other related areas of expertise. An expected 400 – 500 participants from all over the world will enjoy the splendid Conference Center at the Hyatt Regency O'Hare in Chicago, Illinois USA for this technical seminar and experience the exquisite amenities offered by the Hyatt staff at this beautiful location.

Chicago is world renowned for its beautiful sights, cultural attractions and first-class entertainment. Whether a visitor wants to stroll along the beaches of Lake Michigan, tour amazing museums, shop the fabulous "Magnificent Mile", enjoy the culinary scene for excellent dining, take in the sounds of Blues Chicago or be entertained at the leading comedy clubs, Chicago has it all ... Visit Chicago Convention & Tourism Bureau website: http://www.choosechicago.com for an expanded list of attractions, tours and interesting Chicago facts.

Excellent technical presentations, business opportunities with global executives and a visit to one of the world's most interesting and exciting cities, INTERTECH 2011 is an event you will value for years to come.

Optional Evening to Tour Chicago

"DINING AROUND" A Great Value!

INTERTECH 2011 will provide an optional evening for attendees and guests, by offering the opportunity to attend a "DINING AROUND" experience into downtown Chicago. Participants will be picked up at the Hyatt Regency O'Hare and driven on a guided tour to various restaurants in Chicago, where you will enjoy different courses while being entertained with the sites and history of beautiful Chicago. To register go to www.intertechconference.com and click on "Signup for Chicago Dine Around, Dining Tour." The Progressive Dining Tour is ideal for anyone looking for a unique and interactive Chicago dining experience.

TOUR DETAILS: Tuesday, May 3, 2011 • Pickup at Hyatt Regency O'Hare • Price is $95 per person and includes taxes & restaurant gratuities • Included is Hors d'oeuvres and wine at the first restaurant, main course and soft drinks at the second restaurant, dessert and coffee at the third restaurant, transportation, city tour, and all taxes and restaurant gratuities. ***ABOUT THE EXPERIENCE:*** The tour offers the most unique Chicago dining experience. The Progressive Dining Tour is an interactive dining experience designed to bring the people attending **INTERTECH 2011** a memorable experience. The tour is a great way to meet and interact with your colleagues from all over the world! Chicago is well-known for its dining and nightlife. The tour allows people to visit several different restaurants in one evening. They offer a convenient and comfortable experience as you are chauffeured around Chicago in a stylish coach bus, untouched by the elements of the windy city, and escorted into the restaurants where you are seated upon arrival. ***ABOUT THE TOUR:*** They create an entire Chicago experience. Ideal for guests both from Chicago and our world travelers, they provide a fun and interactive city tour en route to each restaurant. The Chicago Dine-Around tour guide will familiarize you with the different neighborhoods visited, point out various points of interest, and offer an overall unique perspective of Chicago. They create an interactive experience on the bus where your participation is welcome. The tour guide will engage you in interesting trivia and facts about Chicago. The Progressive Dining Tour is a great way to see Chicago by night.

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Tomei Corp. of America
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University of Louisville
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US Synthetic Corp.
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Vollmer of America Corp.
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Wemex Superabrasivos, S. DE R.L. DE C.V.
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Winterthur Wendt USA
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Website: www.factdiamond.com

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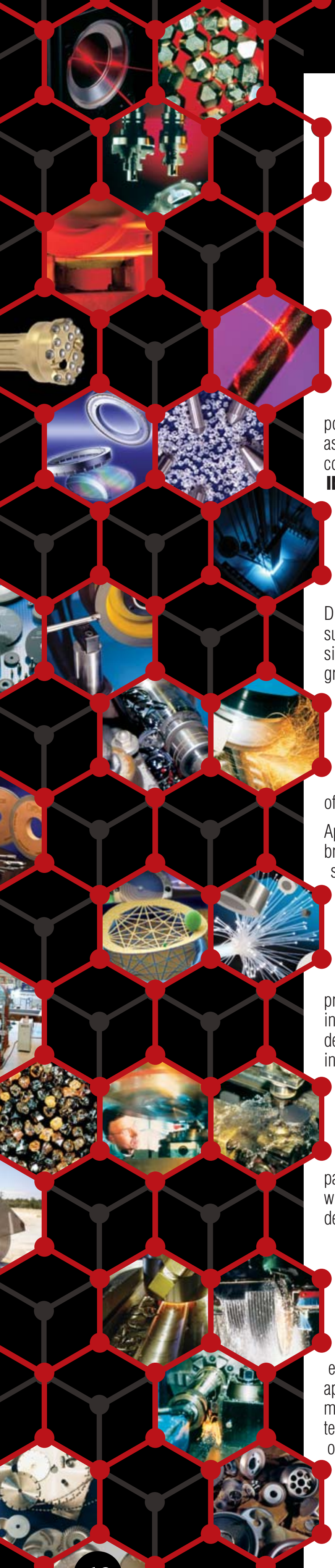


INTERTECH 2011

An International Technical Conference on Diamond, Cubic Boron Nitride and their applications.

www.intertechconference.com

Hyatt Regency O'Hare
CHICAGO, ILLINOIS
May 2-4, 2011

WHAT IS INTERTECH 2011?

INTERTECH 2011 is the Biennial International Conference dedicated to technological advancement and application development with an emphasis on increased productivity and performance using industrial diamond, cubic boron nitride, CVD diamond, polycrystallines and related materials. This conference is designed to provide a blend of commercial and technical topics and serve as a global "meeting of the minds" for technologists and business leaders. Historically, **INTERTECH** has been the most successful conference held on superabrasives, drawing global audiences from commercial and scientific communities with myriad disciplines. **INTERTECH 2011** will continue with that prevailing mission to be the largest, most expansive conference ever conducted in this industry. **INTERTECH 2011** will have global leaders in Research, Superabrasive Synthesis, Manufacturing and Application Development of superabrasives in attendance. Discover and share the most significant product developments and new applications in superabrasive technology at **INTERTECH 2011**!

WHY ATTEND INTERTECH 2011?

Diamond, Cubic Boron Nitride (cBN), polycrystallines and CVD Diamond are making greater strides in most industries. Today, superabrasives or ultra-hard materials are not only serving as abrasives for material removal, but also acting as wear materials, heat sinks, knives, laser widows, heat shields for spacecraft, prosthetics, nanodiamond vehicles to carry disease fighting drugs and other groundbreaking applications.

These superabrasives are making it possible to economically use workpiece materials such as superalloys, high tech ceramics, metal matrix composites, bimetals and many more in manufacturing processes. Leading manufacturers and service providers have made a major commitment to take full advantage of the properties of diamond and other ultra-hard materials in their processes and applications. New workpiece materials, groundbreaking uses and an increased demand for productivity have heralded the need for superabrasives in every application possible. Machine tools are now being designed to take full advantage of superabrasive cutting tools, wheels and blades and this is just the beginning.

Application of superabrasives has grown from the first use of natural diamond to grind tungsten carbide in the early 1940's to a broad range of high production applications across many manufacturing and service industries. From grinding and machining of superalloys and high-tech ceramics in aerospace to metalworking of hardened steel, bi-metals or metal matrix composites in automotive as well as the sawing or drilling of stone and concrete or new uses of nanodiamond and CVD diamond and cBN and cBN, literally every industry is seeing the benefits of diamond and other ultra-hard material properties. Industries have made great strides by increasing productivity, reducing manufacturing & operating costs and implementing new technology.

Whether it's the processing of stone from huge quarries, drawing wire, providing laser windows, shaping wood and laminates, grinding glass, texturing the close tolerances for the discs in electronic hard drives, providing medical breakthroughs in prosthetics or nanotechnology, growing large single crystals or coating base materials with diamond film, superabrasives are industry's choice for myriad solutions and cost effective processes. Much of this explosive growth has occurred in the last three decades. It is vital for continued prosperity that every company and individual, working or doing business in this burgeoning industry, devotes more time and resources to user education and application development.

INTERTECH 2011 has the unique position of global sponsorship and participation, bringing together technical and commercial experts to discuss applications, technical innovations and industry trends that will shape the future.

INTERTECH 2011 will serve as an international meeting for all participants to focus on specific issues related to superabrasive use with common goals of increased productivity, new technological development and reducing overall business costs.

MISSION STATEMENT

The **INTERTECH** conference will serve as an international forum on new technology for diamond, cubic boron nitride (cBN) and other related materials classified as superabrasive or ultra-hard materials. **INTERTECH** will educate attendees and disseminate research and application development information covering these materials. **INTERTECH** will host all global manufacturing, technical, research, academic, commercial and end user organizations to share scientific breakthroughs and innovations. **INTERTECH** will adhere to the mission of blending technical innovation, research and product development with the ultimate focus on end user application.

Photos of Chicago for INTERTECH courtesy of Chicago Convention & Tourism Bureau.

INTERTECH 2011 Organizing Committees

Every INTERTECH we strive to improve all aspects of the conference. This year we not only will be offering a newly created education session along with our outstanding technical sessions, but we also have improved the very core of the conference by restructuring the very organizational committees for INTERTECH. This year the INTERTECH and the Industrial Diamond Association of America (IDA) are proud to introduce the two Committees that are ultimately responsible for putting together INTERTECH 2011. The two committees are the STEERING & PLANNING and TECHNICAL ADVISORY. These two committees have been working together to produce the best combination of presentations and contributors to represent both the Technical and Practical Application sides of the superabrasive industry.

The Steering & Planning Committee changes each INTERTECH and consists of notable business leaders from across the industry. They have dedicated their time and efforts to see that INTERTECH 2011 is a success on every level from the promotional materials, venue & speakers to the program, tabletop exhibits and daily events. Their efforts constitute years of planning and coordination to bring about this International Event.

INTERTECH 2011 Steering & Planning Committee

- TROY HEUERMANN, 3M Abrasive Systems Division
- DAVID L. EDWARDS, Action Superabrasive Products, Inc.
- EDWARD E. GALEN, Cinetic Landis Corp - CITCO Products
- JOSEPH M. CONNOLLY, Element Six
- ION C. BENEA, PhD, Engis Corporation
- DAVID SPELBRINK, Lieber & Solow, Company
- JAY K.R. LUNZER, Lunzer, Inc.
- KEITH RECKLING, National Research Company
- DAVID M. SIMPSON, Sumitomo Electric Carbide, Inc. Materials Group
- SCOTT RIES, Vollmer Of America Corporation
- R. CHRISTIAN WINKEL, Worldwide Superabrasives

INTERTECH Chairman TERRY M. KANE, Executive Director
Industrial Diamond Association of America, Inc.

Meeting Planner KATHY A. KANE, Business Manager,
Industrial Diamond Association of America, Inc.

Newly formed for INTERTECH 2011 is the TECHNICAL ADVISORY COMMITTEE which provides the technical guidance and recommendations for the technical portion of INTERTECH 2011. They will also provide formal review of the submitted abstracts and papers to insure that the quality and content of each paper is relevant and representative of the technology for the superabrasives industry and guarantee each conference session will consist of the best research papers and state-of-the-art topics for our industry. The TECHNICAL ADVISORY COMMITTEE is a standing committee in itself to assist through-out the year to expand technical programs of the IDA and to make sure the content of technical information is legitimate, viable and valuable. As recommended by the IDA Board of Directors, Dr. Ion Benea will serve as the founding Chairman of this committee for a two year term; future chair people to be voted on by committee. Anyone willing to serve has a position as long as they want it providing they follow IDA code of ethics as outlined in the IDA By-laws. The TECHNICAL ADVISORY COMMITTEE (as technical advisory body) will be made up of scientists and engineers well known in the world of superabrasives. The goal is to improve on the technical content of INTERTECH Conferences, Annual Meetings and Finer Points Magazine. Consequently, the IDA has reached out to industry, research and academia (universities) for help in forming this committee. The goal is for the Technical Advisory Committee to have a balanced composition between industry – research and academia.

INTERTECH 2011 – Technical Advisory Committee

TAC Founding Chairman DR. ION BENEA, Vice President Operations
Hyprez Products Engis Corporation

- Professor JOHN ANGUS - Case Western Reserve University, OH
- Dr. JAMES BUTLER - Retired from Naval Research currently a consultant in chemical vapor deposition (CVD) and applications of diamond materials in Huntingtown, MD.
- Dr. MIKE FISH, Executive Director R&D - Element Six, Ireland
- Dr. RICHARD HALL, Director of Technology - Saint Gobain Abrasives MA
- Dr. ROBERT LINARES, President & CEO - Apollo Diamond, MA
- Mr. JOHN LUCEK - Diamond Innovations
- Professor IOAN MARINESCU - University of Toledo, OH
- Professor HITOSHI OHMORI – Riken Institute, Japan
- Professor KIYOSHI SUZUKI – Nippon Institute of Technology, Japan

INTERTECH 2011*
Event Snapshot

Chicago, Illinois, USA • May 2-4, 2011

MONDAY, MAY 2

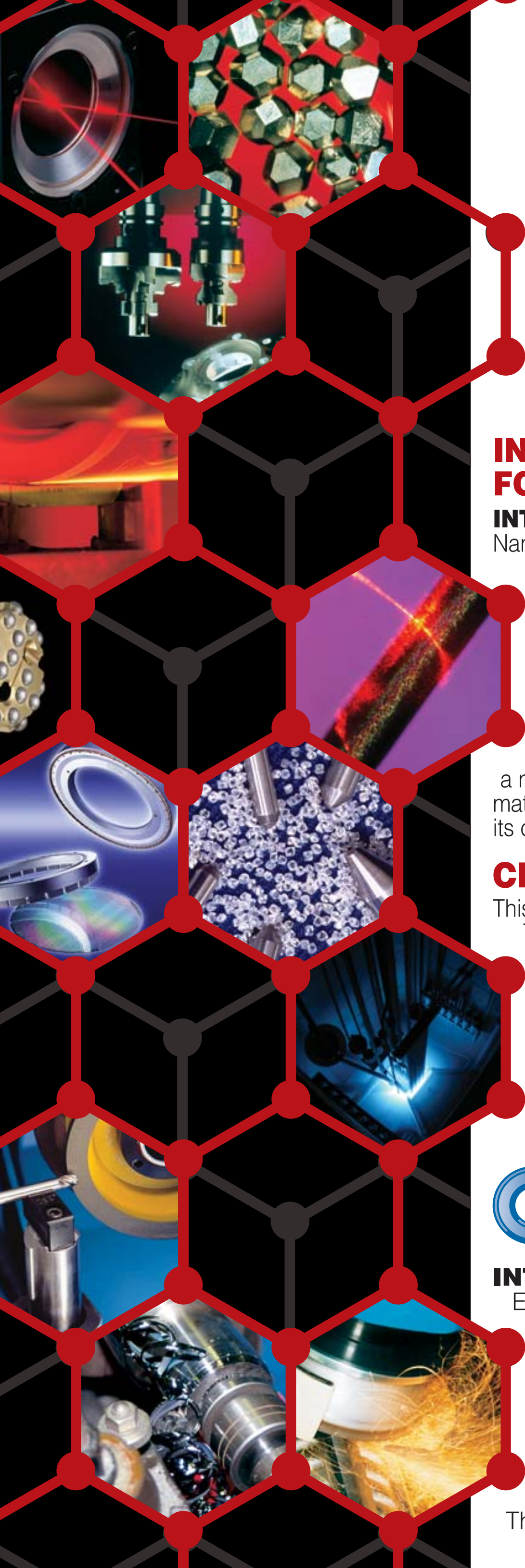
	REGISTRATION 8-12:00 Noon CONTINENTAL BREAKFAST 7:00-8:00 am	
	8:00-8:45 am – Keynote Speaker: **Dr. Dean Ho**, Associate Professor Biomedical and Mechanical Engineering Northwestern University, USA	
MORNING	8:45-12 Noon CONCURRENT TECHNICAL SESSIONS • RESEARCH & DEVELOPMENT	8:45-12 Noon CONCURRENT TECHNICAL SESSIONS • STONE/CONCRETE
	12 Noon - 1:00 pm LUNCH	
	1:00 -1:45 pm – Keynote Speaker: **Mark Schweizer** CEO & President – Diamond Innovations, USA	
AFTERNOON	1:45 pm - 4:45 pm CONCURRENT TECHNICAL SESSIONS • RESEARCH & DEVELOPMENT	1:45 pm - 4:45 pm CONCURRENT TECHNICAL SESSIONS • MINING & DRILLING
Evening	6:00 pm - 8:00 pm WELCOME RECEPTION – *Hors d' oeuvres & Cocktails*	

TUESDAY, MAY 3

	REGISTRATION 8-12:00 Noon CONTINENTAL BREAKFAST 7:00-8:00 am		
	8:00-8:45 am – Keynote Speaker: **Walter Huehn**, Executive Director Advanced Materials and Technologies Division Element Six, Germany		
MORNING	8:45-12 Noon CONCURRENT TECHNICAL SESSIONS • ULTRA HARD & DEVELOPMENT MATERIALS	8:45-12 Noon CONCURRENT TECHNICAL SESSIONS • AEROSPACE	8:45-12 Noon EDUCATIONAL SESSIONS • Superabrasive History • Abrasive Types & Properties • Diamond & cBN Grinding
	12 Noon - 1:00 pm LUNCH		
AFTERNOON	1:00 pm - 4:45 pm CONCURRENT TECHNICAL SESSIONS • ULTRA HARD & DEVELOPMENT MATERIALS	1:00 pm - 4:45 pm CONCURRENT TECHNICAL SESSIONS • AEROSPACE	1:00 pm - 4:45 pm CONCURRENT EDUCATIONAL SESSIONS • Superabrasive Machining & Drilling PCD & PCBN • Abrasive Types & Properties • Non Abrasive Uses
Evening	5:30 pm - 10:30 pm **OPTIONAL CHICAGO "DINE AROUND" TOUR** A Progressive Dining Experience and Tour of Chicago		

WEDNESDAY, MAY 4

	REGISTRATION 8-12:00 Noon CONTINENTAL BREAKFAST 7:00-8:00 am		
	8:00-8:45 am – Keynote Speaker: **Mitsuhiro "Chip" Goto**, Managing Director, General Manager – Sumitomo Electric Hardmetal Corporation, Japan		
MORNING	8:45-12 Noon CONCURRENT TECHNICAL SESSIONS • AUTOMOTIVE	8:45-12 Noon CONCURRENT TECHNICAL SESSIONS • TOOL PROCESSING & PROPERTIES	8:45-12 Noon CONCURRENT TECHNICAL SESSIONS • ELECTRONICS & OPTICS
	12 Noon - 1:00 pm LUNCH		
AFTERNOON	1:00 pm - 4:45 pm CONCURRENT TECHNICAL SESSIONS • AUTOMOTIVE	1:00 pm - 4:45 pm CONCURRENT TECHNICAL SESSIONS • TOOL PROCESSING & PROPERTIES	1:00 pm - 4:45 pm CONCURRENT TECHNICAL SESSIONS • ELECTRONICS & OPTICS
Evening	OPEN EVENING ***PROGRAM SUBJECT TO CHANGE* *Depending on final approval of selected Abstracts & Papers*		



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An International Technical Conference on Diamond, Cubic Boron Nitride and their applications.

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Hyatt Regency O'Hare
CHICAGO, ILLINOIS
May 2-4, 2011

INTERTECH 2011 WILL BE THE FEATURED CONFERENCE FOR NEW TECHNOLOGY AND APPLICATION DEVELOPMENT OF SUPER-HARD MATERIALS

INTERTECH 2011 is the leading International Technical Conference on industrial diamond, cubic boron nitride, polycrystallines, CVD diamond, Nanodiamond and other materials classified as superabrasives and ultra-hard materials. **INTERTECH 2011** will feature leading experts representing international suppliers, manufacturers, research facilities, academia, end-users, machine tool builders and the scientific community. They will be presenting papers on subjects that will introduce new and thought-provoking technology on industrial and commercial levels. This will be an international "meeting of the minds" for every aspect of ultra-hard material science.

INTRODUCING SPECIAL EDUCATION SESSION –

"Superabrasive Materials, Principles & Applications"

For the first time at INTERTECH, a concurrent one-day session will be offered covering the history, characteristics and proper application for diamond and cubic boron nitride materials. This session is a newly created educational package to address the essentials of superabrasives and ultra-hard materials for those new to the industry or those who wish to become more familiar with the industry and its critical materials and applications.

CHICAGO IS A MAJOR ATTRACTION

This sensational event will be held at Chicago's Hyatt Regency O'Hare in Chicago, Illinois USA. The Hyatt Regency has been a major partner of **INTERTECH** for many years and we are anticipating the usual excellent attention and personal service that has become the standard of **INTERTECH** conferences. The Hyatt boasts beautiful accommodations, a new conference center and luxurious amenities. The Hyatt is conveniently located both to O'Hare airport and nearby Metro service to downtown Chicago for fine dining, world renown shopping, attractions, theaters, clubs and amazing sight seeing. This will be a rewarding technical experience complimented by a trip to the world-famous and historic city of Chicago. **INTERTECH 2011** will be a "have to attend" conference and a memorable experience! *Photos of Chicago for INTERTECH courtesy of Chicago Convention & Tourism Bureau.*

CALL FOR PAPERS!

INTERTECH 2011 will be co-sponsored by the leading global Organizations for this industry - Abrasive Engineering Society, The American Ceramics Society, ASM International, Assodiamante, Concrete Sawing & Drilling Association, Elsevier Diamond Conference, F.E.P.A., IDA America, IDA China, IDA-India, IDA-Japan, The International Association of Concrete Drillers and Sawers, Japan Society for Abrasive Technology, Society of Manufacturing Engineers (SME), the Unified Abrasive Manufacturers Association (UAMA) and others to be announced. ***You can be part of this exciting event!*** We will still accept commercial and technical papers of approximately 30-45 minutes in length that address the research of these super-hard materials as well as the dynamics and application of superabrasive systems in all industries and areas (see: Areas of Consideration) with a focus on new technology, tooling, workpiece materials, machines and applications related to increased **PRODUCTIVITY** and **PERFORMANCE**. Consideration for papers is being made at this time and abstracts are now being accepted; contact us today to be considered. This will be the most comprehensive event ever held on super-hard materials!

AREAS OF CONSIDERATION FOR PAPERS

AREOSPACE
- Manufacturing
  - Rebuilding

AUTOMOTIVE
- Parts Manufacturing
- Gears
- Wheels
- Transmissions
- Engines

CONSTRUCTION/ HIGHWAY
- Concrete Aggregates & Variables
- Highway/Runway
  – Grinding & Grooving
  – Bridge Repair
- Renovation
- Block Grinding
- Polishing

ELECTRONICS
- Disc Texturing
- Wafer Mfg.
- Polishing
- Optic Windows
- Semiconductors
- Heat Sinks

EMERGING TECHNOLOGY
- CVD Diamond
- Nanodiamond
- New Crystals
- Coatings

GLASS
- Lens Generation
- Polishing
- Pencil Edging

MACHINE TOOLS
- Development
- Innovations
- Advancements
- Superabrasive Adaptation

MEDICAL
- Surgical Knives
- Prosthesis Fabrication

MINING/DRILLING/NATURAL RESOURCE EXPLORATION
- Drills & Bits
- Application

NANOTECHNOLOGY
- Medical Developments
- Industrial Applicatins
- Electronics
- Other Research & Developments

OTHER MANUFACTURING
- Pumps
- Motors
- Heavy Equipment

OPTICS
- Polishing
- Lens Generation
- Diamond Coating

RESEARCH & DEVELOPMENT
- New Crystals & Abrasives
- New Coatings
- Bond Development
- Testing/Gauging
- Tool Fabrication
- Materials
- Tooling
- Application Development
- HPHT Technology
- Film (CVD & PVD)
- Magnetorheological Finishing
- Electrolytic In-process Dressing (ELID) Mirror-Surface Grinding
- Nanotechnology

STONE PROCESSING
- Quarrying
- Sawing
- Polishing

SUPPLIERS TO SUPERABRASIVE INDUSTRY
- Metals
- Coolants
- Measuring & Gauging
- Safety
- Pressing Equipment

TOOLING
- Grinding Wheels
- Cutting Tools
- Sawblades
- Drill Bits

WEAR PARTS
- Rests
- Anvils
- Nozzles

WIRE DRAWING
- New Technology
- Applications
- Application
- Single Crystal
- PCD
- Manufacturing

WOODWORKING
- Hard Woods
- Fiberboard
- Laminates
- Composites

WORKPIECE MATERIALS
- Metal Matrix Composites
- Bi-Metals
- High Tech Ceramics
- High Silica Aluminum
- Wood & Wood Composites
- Glass
- Stone
- Concrete
- New Metals & Alloys
- Thermal Sprays
- Superalloys
- Nano-Structured Materials

OTHER NEW TECHNOLOGY & APPLICATION DEVELOPMENT

REGISTRATION MATERIALS FOR INTERTECH 2011 CAN BE FOUND IN THIS ISSUE OF FINER POINTS

As you can see by the areas for paper consideration, diamond and cubic boron nitride are not just being used as abrasives in traditional applications. Today, superabrasives and ultra-hard materials are making inroads in electronics, medical, cosmetics and literally every other industry where the characteristics of diamond and cubic boron nitride can affect performance or provide higher strength or new capabilities. As an **INTERTECH** attendee you will learn how these new products and applications are being developed, where super-hard materials are being used and how you can apply these systems in new and innovative ways. See the **INTERTECH 2011** website: **www.intertechconference.com** for additional information on: ● LOCATION & TRAVEL ● SESSIONS & SCHEDULES ● PAPER GUIDELINES ● VISAS AND INVITATION LETTERS ● SPEAKERS & TOPICS ● TABLETOP DISPLAYS ● KEYNOTE ADDRESSES ● ORGANIZING COMMITTEE CONTACTS

LATE SUBMISSION OF PAPERS CAN ONLY BE ACCEPTED AFTER APRIL 1, 2011 IF SUBMITTED DIRECT TO INTERTECH 2011 CHAIRMAN
At: tkane-ida@insight.rr.com ● Fax: 614-797-2265 ● Call with Questions: 614-797-2265

Come join us! **INTERTECH** has the tradition of being the most comprehensive event held on superabrasives and ultra-hard materials. (PLEASE PRINT CLEARLY AND FILL OUT COMPLETELY. INCLUDE ABSTRACT)

Name: ____________________ Title: ____________________

Date: ____________________ Company: ____________________

Address: ____________________

City: ____________________ State/Province: ____________________ Zip/Postal Code: ____________________

Country: ____________________ Phone: ____________________ Fax: ____________________

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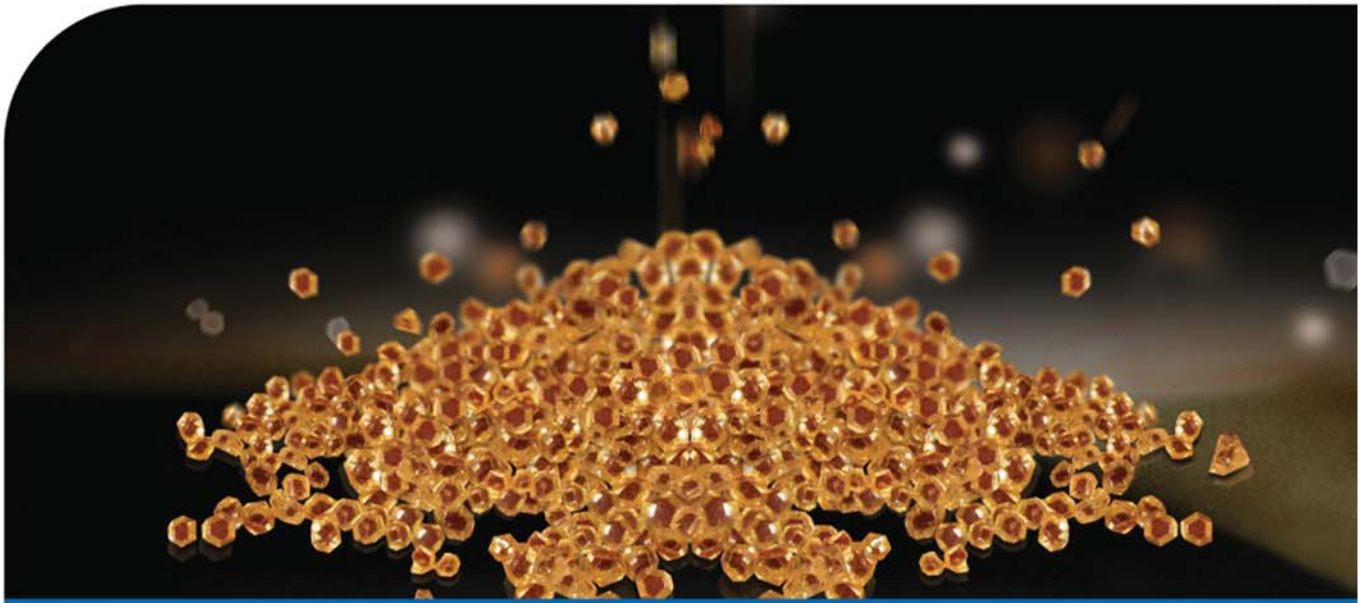
the Leading Company of Tool Materials.

CREATE NEW VALUE

ILJIN Diamond provides customers with exceptional value through superlative quality.



Grit Products

- Best Solution for Longer Tool Life & Cutting Performance
- Excellent Thermal & Chemical Stability
- Outstanding Performance to Meet Customers' Needs

IMD (Metal Bond)	IMD series are engineered to achieve high material removal rate as well as excellent surface finishing, especially for metal bond system.
IRD (Resin Bond)	IRD series show optimum performance in all bond systems from phenolic to polyimide resin. 30-56wt% cluster and spiky type Ni coating, as well as 50wt% Cu coating are available.
IBN (cBN)	IBN series are designed for grinding hardened ferrous and superalloy materials. IBN can be applied with a variety of bond systems. Ti and Ni coating are available.
IMP (Micron Powder)	IMP series are manufactured from premium quality raw materials by cutting edge micronizing techniques (tight PSD, shape and surface control).
ISD (Saw)	ISD series are available from bloky shape to angular shape to meet all requirements in stone and construction industries. Various Ti based coatings are available.
IPD (Premium Saw)	IPD series with the highest strength, thermal stability and micro-fracturing property is created by unique synthesizing technologies for the high end market in sawing and drilling. Various Ti based coatings are available.

Hard Materials

Tungsten carbide rods and blanks are materials for machining tools such as endmills, drills and reamers in tooling as well as micro drills such as drill bits and router bits for electronics.

01 | Excellent wear resistance and toughness by ultra fine WC grain sizes

02 | Various choices from micro(Dia 1.3) to macro(Dia 25.2)

03 | Manufactured by one step sintering-HIP process

Cutting Tool Materials

- **Best Solution for Longer Tool Life**
- **Extreme Wear & Abrasion Resistance**
- **Excellent Thermal & Chemical Stability**

ILJIN Polycrystalline Diamond for non-ferrous materials

- Application(Non-ferrous materials) : Al-Si Alloy, Copper Alloy, Carbide, Graphite, Wood, Plastics etc.
- Available Grades : CXL, CM, CMW, CFW, CUF, XUFII

ILJIN Polycrystalline Cubic Boron Nitride for ferrous materials

- Application(Ferrous materials) : Soft Cast Iron, Hard Cast Iron, Hardened Steel, Powder Metal, Superalloy etc.
- Available Grades: SB95N, SB80, SB70, SB600, SB500, SB100

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ILJIN
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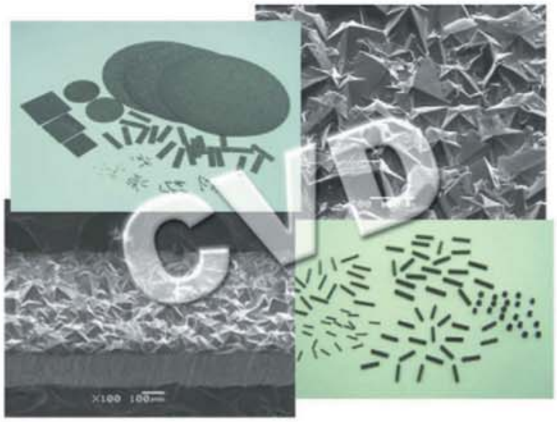
IBON is Polycyrstalline Cubic Boron Nitride (PCBN) with fine grained and randomly oriented texture developed by ILJIN Diamond's latest technology. **The new IBON products are specially designed for machining ferrous materials – cast irons, hardened steels, powdered metals and heat-resistant superalloys.** Available grades: SB100, SB95, SB90, SB80, SB70, SB60, and SB50.
Disc Size 57MM Diameter

IPOL stands for ILJIN Polycrystalline Diamond (PCD). IPOL-PCD is characterized by superior hardness, excellent wear resistance, highest thermal conductivity and uniform wear in all directions. **It's designed for machining non-ferrous metals, alloys, tungsten carbides, plastics, wood, ceramics and wear parts.** Available grades: CC, CM, CF, CMW, CXL, CXL II, CUF and CXUF-sub micron.
Disc Sizes 60MM & 75MM Diameter



CVD is Chemical Vapor Deposition Diamond

"IT'S PURE DIAMOND"

- Harder, more wear-resistant
- High thermal conductivity
- Better chemical and thermal stability
- Lower coefficient of friction

Available in various shapes and sizes for many applications.

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Attendees, authors, speakers and the organizing committee represent the global participation for INTERTECH 2011 with 30% from Europe, 15% from the Pacific and 55% from the Americas.

3M Abrasive Systems Division>USA
A.L.M.T. Corp.>Japan
A.Termika Ltd.>Israel
Accutome, Inc.>USA
Action Superabrasive Products, Inc.>USA
Advanced Abrasives Corp.>USA
Advanced Diamond Solution>USA
AGH-University of Science & Technology>Poland
Allied Machine & Engineering Corp.>USA
American Superabrasives Corp.>USA
ANCO Industrial Diamond Corp.>USA
APOGEE Precision Parts>USA
Apollo Diamond, INC.>USA
Baker Hughes>USA
Big Sky EDM>USA
Bogimac nv-sa>Belgium
Case Western Reserve>USA
Centre National de la Recherche Scientifique>France
CINETIC Landis Corp - CITCO Products>USA
Cinetic Landis Corp. - CITCO & Gardner Abrasives>USA
College of Construction Engineering Jilin University>China
Crystallume>USA
CSIRO>Australia
Cutting Edge Services Corp>USA
Delaware Diamond Knives, Inc.>USA
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Diamond Industrial Tools>USA
Diamond Innovations>USA
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Iljin USA, Inc.>USA
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Industrial Diamond Association of China>China
Institute of Grinding and Precision Technology (KSF)>Germany
KINIK Company>Taiwan
LACH Diamond, Inc.>USA
Landis Cinetic>USA
Lands Superabrasives Company>USA
Lieber & Solow Co.>Belgium
Lieber & Solow Co.>USA
Liverpool John Moores University>UK
Lunzer, Inc.>USA
Megadiamond A Schlumberger company>USA
Megadiamond Inc.>USA
Morgan Advanced Materials and Technology>USA
Morgan Technical Ceramics>USA
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National Research Company>USA
National Taipei University of Technology>Taiwan
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NH World Trade Co.>China
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Saint-Gobain Abrasives>USA
Saint-Gobain Ceramic Materials>USA
Simple Technology, Inc.>USA
SinoDiamond>China
sp3 Cutting Tools Inc.>USA
sp3 Diamond Technologies>USA
SPEC Tool>USA
State University of Northern Fluminense (UENF)>Brazil
Sumitomo Electric Carbide/Materials Group>USA
Sumitomo Electric Hardmetal Corporation>Japan
Synova>USA
Synova SA>Switzerland
TechSolve Inc.>USA
Telek Global, Inc.>USA
The Boeing Company>USA
The Grinding Doc Consulting>USA
The Timken Company>USA
Tomei Corp. of America>USA
Toyama Prefectural University>Japan
TRENKER ABRASIVE PLANT TECHNOLOGY>Germany
Universidade Candido Mendes Campos>Brazil
University of Nevada Las Vegas>USA
University of Toledo>USA
US Synthetic Corporation>USA
Varel International>USA
Vollmer of America Corp.>USA
Vollstädt-Diamant GmbH>Germany
WEMEX Superabrasivos, S. DE R.L. DE C.V.>Mexico
Wendt GmbH Winterthur Technology Group>Germany
Winterthur Wendt USA>USA
Worldwide Superabrasives>USA
WZL of RWTH Aachen University>Germany

INTERTECH 2011 KEYNOTE SPEAKERS

DR. DEAN HO

Associate Professor, Biomedical and Mechanical Engineering, Northwestern University

Dr. Dean Ho is currently an Associate Professor in the Departments of Biomedical Engineering and Mechanical Engineering in the Robert R. McCormick School of Engineering and Applied Science, and Member of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University where he directs the Laboratory for Nanoscale Biotic-Abiotic Systems Engineering (N-BASE). Dr. Ho is investigating the fabrication of nanodiamond-based technologies for drug delivery as well as localized and targeted chemotherapy using novel nanomaterial devices. He has published over 100 peer-reviewed journal and proceedings manuscripts in the areas of nanomedicine, drug delivery, and nanomaterials. Dr. Ho's research achievements have garnered news coverage on the CNN and NPR homepages, Reuters, Yahoo, and The Chicago Tribune, among other international news outlets. Dr. Ho has also appeared on the National Geographic Channel program 'Known Universe' which aired domestically and internationally. Dr. Ho is currently Editor-in-Chief of the Journal of the Association for Laboratory Automation, and serves on the Editorial Boards of Nanomedicine: Nanotechnology, Biology and Medicine, the Journal of Biomedical Nanotechnology, and Journal of Nanotechnology Law and Business. He is a recipient of the National Science Foundation CAREER Award, Wallace H. Coulter Foundation Early Career Award for Translational Research, Phase 2 Coulter Translational Research Award, and V Foundation for Cancer Research V Scholars Award. In addition, Dr. Ho was a recipient of the John G. Bollinger Outstanding Young Manufacturing Engineer Award of the Society of Manufacturing Engineers, attendee of the National Academy of Engineering Frontiers of Engineering Symposium, and received the Distinguished Young Alumnus Award from the UCLA School of Engineering and Applied Science.

MITSUHIRO "CHIP" GOTO

Managing Director, General Manager, Department of Development Managing, Sumitomo Electric Hardmetal Corporation, Itami, Japan

A direct descendant of the original Sumitomo Company started 400 years ago in the historical city of Kyoto Japan - Sumitomo Electric Hardmetal Corporation is today a world leader in the development of high performance cutting tools for the metal cutting sector. Mr. Goto is a graduate of Osaka University where he obtained his Master's Degree in Material Science. He joined Sumitomo Electric Industries in 1984 and in 1995 was appointed to the position of Engineering Manager of Sumitomo Electric Hartmetall GmbH in Germany. Subsequently, in 2000 Mr. Goto was appointed Manager of Super Hard Material Development at Sumitomo Electric Industries, Super Hard Metal Division. In 2003 Mr. Goto was named Vice President of Sumitomo Electric Carbide in the United States and assumed the role of President in 2007. In 2011 he accepted the position of Managing Director, General Manager, Department of Development Managing, Sumitomo Electric Hardmetal Corporation in Itami, Japan.

INTERTECH 2011 is proud to present an impressive list of KEYNOTE SPEAKERS representing leading Industry Business and Innovative Diamond Research

WALTER HUEHN

Executive Director, Advanced Materials & Technologies Division, Element Six, Frankfurt, Germany

Element Six is a subsidiary of De Beers and is a world leading manufacturer and supplier of industrial Diamond super materials. Element Six operates globally with its head office registered in Luxembourg, and primary manufacturing facilities in China, Germany, Ireland, Sweden, South Africa and the UK. Its industrial Diamond super materials are used in applications such as cutting, grinding, drilling, shearing and polishing, while the extreme properties of diamond beyond hardness are opening up potential applications in a wide array of industries such as optics, power transmission, water treatment, semi-conductors and sensors. Walter joined E6 in 2008 and has had strong focus on the increased commercial success of Advanced Materials during this period. From 2003 to 2008 Mr. Huehn was Vice President of Business Development at Birdstep Technology ASA. Earlier, Walter served as Managing Director of Motorola Germany, also establishing Motorola's international Key Account organisation for Network Operators and being part of Motorola's new Global Consumer Marketing initiatives. From 1992 – 1999 Walter worked in Fujitsu Computers where he was Director of their Major Account Business, driving new Product and Services offerings. He was also engaged in the start-up of a Norwegian Telecommunications Software company.

MARK SCHWEIZER

President of Diamond Innovations, Inc. Worthington, Ohio USA

Diamond Innovations is a world leader in highly-engineered superabrasive materials (synthetic diamond and cubic boron nitride) used in machining, grinding, drilling, and other material removal applications. He re-joined the company as its President on January 1, 2011. During a previous four-year period of employment at Diamond Innovations, Mark was the Vice President of Global Product Management and Marketing. As the leader of the Product Management group, Mark was responsible for developing the business' strategies and driving P&L performance by focusing cross-functional resources (engineering, operations, sales, etc.) to address these business priorities. Mark originally joined Diamond Innovations shortly after the business had been acquired by a private equity investor and was an integral member of the leadership team that transformed the business resulting in the successful acquisition by, and integration into Sandvik, AB in 2007. Prior to rejoining Diamond Innovations, Mark was the President and CEO of Sunpower Inc. During his tenure, Mark significantly grew the core business and positioned the company for expanding into new markets. Sunpower technology has been adopted by NASA to electrically power all deep space missions from 2015 and beyond. Mark was also previously a Principal at Booz Allen Hamilton. At Booz Allen, Mark's work focused on product and sales/marketing strategy in the automotive industry. Mark's consulting experience includes more than two dozen senior-management level consulting engagements with Fortune 500 companies. Mark's formal education is in electrical engineering from the University of Cincinnati where he earned a BS degree in Electrical Engineering followed by an MS in Electrical Engineering degree from the Massachusetts Institute of Technology.

FOLLOWING ARE THE ABSTRACT TITLES, AUTHORS AND COMPANIES, CURRENTLY UNDER CONSIDERATION FOR FINAL PRESENTATION FOR THE DESIGNATED SESSIONS AT INTERTECH 2011

AEROSPACE SESSION

INTERTECH Ref# 1111
INFLUENCE OF GRINDING WHEEL HUB MATERIAL ON THE HIGH EFFICIENCY DEEP GRINDING (HEDG) PROCESS
Taghi Tawakoli, Professor – *A. Vesali, Institute of Grinding and Precision Technology (KSF), Germany*

INTERTECH Ref# 1122
NEW DEVELOPMENTS IN HIGH EFFICIENCY DEEP GRINDING
Andre Batako, PhD – *Liverpool John Moores University, UK*

INTERTECH Ref# 1125
OPTIMIZATION OF CREEP FEED GRINDING OF NICKEL–BASED ALLOYS FOR QUALITY PRODUCTION
Radu Pavel, Machining/Grinding Research Engineer, – **Xiqun Wang, Anil Srivastava** – *TechSolve Inc., USA*

INTERTECH Ref# 1137
IMPROVED MACHINING OF NON-FERROUS METALS UTILIZING A NEW FINE GRAINED PCD
William Russell, Senior Development Engineer – *Diamond Innovations, USA*

INTERTECH Ref# 1141
SUPERALLOY GRINDING PRODUCTIVITY IMPROVEMENT WITH NEW CBN CRYSTALS
Sridhar Kompella, Mesh Applications Technology Manager – *Diamond Innovations, USA*

INTERTECH Ref# 1142
SUPERALLOY GRINDING WITH ELECTROPLATED CBN WHEELS AND INFLUENCE OF MANUFACTURING QUALITY ON PERFORMANCE
Sridhar Kompella, Mesh Applications Technology Manager – *Diamond Innovations, USA*

INTERTECH Ref# 1159
MACHINING TITANIUM ALLOYS WITH PCD
Stephen Kelly, Regional Technical Manager – *Element Six, USA,* **Neels Pretorius, Tom Toomey** – *Element Six, Ireland,* **Wayne Leahy** – *Element Six, Japan*

INTERTECH Ref# 1166
REQUIREMENTS FOR CUTTING TOOL MATERIALS FOR THE AIRFRAME INDUSTRY
Jeff Lantrip, Mesh Assembly Technologies - Drilling Process Development – *The Boeing Company, USA*

AUTOMOTIVE SESSION

INTERTECH Ref# 1110
SELECTION OF GRITS IN ABRASIVE TOOLS – ONE WAY TO SUSTAINABILITY
Barbara S. Linke, Dr.-Ing., F. Klocke – *WZL of RWTH Aachen University, Germany*

INTERTECH Ref# 1115
MACHINING PERFORMANCE AND MECHANICAL PROPERTIES OF SOLID TYPE PCBN (POLYCRYSTALLINE CUBIC BORON NITRIDE)
Woo Sung Kim – *ILJIN DIAMOND, Korea*

INTERTECH Ref# 1121
THE EFFECTS OF PCBN TOOL WEAR ON CUTTING FORCES AND SURFACE INTEGRITY IN FINISH HARD TURNING
Rahul Chaudhari, Manager, Machining and Finishing – *The Timken Company, USA*

INTERTECH Ref# 1131
CHARACTERIZATION OF VITRIFIED CBN GRINDING WHEELS FROM A THERMAL PERSPECTIVE IN CAM GRINDING
Don Cutchall, Senior Applications Engineer – *Winterthur Wendt USA, USA*

INTERTECH Ref# 1132
FINEGRINDING DEVELOPED AS A PROVEN PROCESS COMPARABLE WITH LAPPING TO FINISH HIGH PRECISION WORKPIECES
Matthias Martin, Product Manager – *Wendt GmbH Winterthur Technology Group, Germany*

INTERTECH Ref# 1138
A COMPUTER MODEL FOR WORN CUTTING EDGE IN HARD TURNING
Raja Kountanya, Senior Development Engineer – *Diamond Innovations, USA*

INTERTECH Ref# 1155
EVALUATION OF PERFORMANCE OF NANOSTRUCTURED CBN INSERTS IN MACHINING STEEL
Ana Lucia Diegues Skury, Professor – *State University of Northern Fluminense (UENF), Brazil*

INTERTECH Ref# 1161
NEW HIGH STRENGTH CBN ABRASIVE FOR SINGLE LAYER TOOLS
Cormac Lee, Applications Engineer, **Mark O'Sullivan** – *Element Six, Ireland,* **Karolina Hannersjö** – *Element Six, Sweden*

INTERTECH Ref# 1167
DEVELOPMENT OF NEW PCBN GRADE FOR FERROUS POWDER METAL FINISHING
Toshiyuki (Tony) Sahashi, President – *Sumitomo Electric Carbide Inc., USA*

ELECTRONICS & OPTICS

INTERTECH Ref# 1124
DEVELOPMENT OF PRECISION FIXED-DIAMOND WIRE PWS
Nobuhide Nakamura – *A.L.M.T. Corp., Japan*

INTERTECH Ref# 1127
THE CMP BY POLISHING WITH GIP DRESSED BY BODD
James C. Sung, President, **Cheng-Shiang Chou** – *KINIK Company, Taiwan,* **Ming-Yi Tsai** – *National Chin-Yi University of Technology, Taiwan,* **Pei-Lum Tso** – *National Tsing Hua University, Taiwan,* **Ying-Tung Chen** – *National Defense University, Taiwan*

INTERTECH Ref# 1128
DIAMOND ISLANDS WAFER FOR SUPER LED MANUFACTURE
James C. Sung, President, **Ming-Chi Kan, Chung Hu** – *KINIK Company, Taiwan,* **Pei-Lum Tso** – *Taidiam Technology, China,* **Michael Sung** – *Advanced Diamond Solutions, USA*

INTERTECH Ref# 1130
APPLICATION AND MANUFACTURING OF ELECTROPLATED TOOLS WITH SUPER-ABRASIVES FOR THE SEMICONDUCTOR AND SOLAR INDUSTRY
Alfred Trenker, President – *Trenker Abrasive Plant Technology, Germany*

INTERTECH Ref# 1134
NANOTECHNOLOGY FOR MANUFACTURING ULTRATHERMOCONDUCTIVE COMPOSITE MATERIALS
Smirnov Evgeny, Head of Laboratory – *Nanoengineering, Russia*

INTERTECH Ref# 1136
LARGE GRAPHITE FILMS EVOLVED FROM MOLTEN METAL CATALYST
Kuen-Liang Chang, Kai-Hung Hsu – *National Taipei University of Technology, Taiwan,* **Michael Sung** – *Advanced Diamond Solutions, USA,* **James C. Sung, Shao-Chung Hu, I-Chiao Lin, Chien-Pei Yu** – *KINIK Company, Taiwan*

INTERTECH Ref# 1153
THE EFFECT OF CVD DIAMOND COATED CMP CONDITIONER D
David Slutz – *Morgan Technical Ceramics, USA*

INTERTECH Ref# 1162
LARGE SINGLE CRYSTAL HPHT IIA DIAMOND FOR HIGH QUALITY X-RAY OPTICAL PLATES AT 3RD AND 4TH GENERATION LIGHT SOURCES
Paul Balog, PhD, Carlton Dodge, PhD, Raymond Spits, PhD – *Element Six, British Isles,* **Ian Friel, PhD** – *Element Six, UK,* **Dr. rer. nat. habil. Jürgen Härtwig** – *European Synchrotron Radiation Facility, France*

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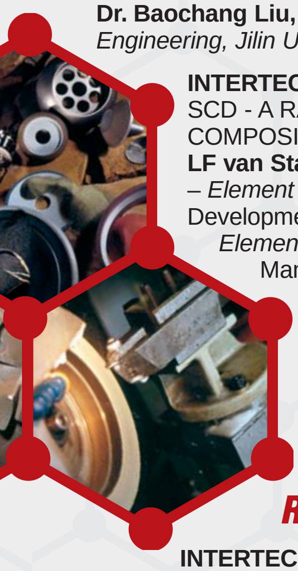
INTERTECH Ref# 1112
EVALUATION OF MICROSTRUCTURE, WEAR CHARACTERISTICS AND CUTTING PERFORMANCE OF DIAMOND COMPOSITE TOOLS
Xing Sheng Li, Research Leader, **James N. Boland, PhD** – *CSIRO, Australia*

INTERTECH Ref# 1133
STUDY OF THE INFLUENCE OF COBALT CONTENT ON POLYCRYSTALLINE DIAMOND (PCD) MECHANICAL PROPERTIES
Dan Belnap, PhD, Yi Fang and Haibo Zhang – *Megadiamond A Schlumberger company, USA*

INTERTECH Ref# 1143
DIAMOND IMPREGNATED BIT ENHANCED WITH CVD DIAMOND PINS AND IT'S DRILLING PERFORMANCE
Dr. Baochang Liu, Associate Professor – *College of Construction Engineering, Jilin University, China*



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SCD - A RANGE OF 3D POLYCRYSTALLINE DIAMOND COMPOSITES
LF van Staden, Composite Diamond Manufacturing Plant – *Element Six, South Africa,* **Gerry Flynn,** Business, Development Manager, Ultrahard Material Solutions – *Element Six, UK,* **Wayne Leahy,** Regional Technical Manager – *Element Six, Japan*

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NEW CUTTER TECHNOLOGY IMPROVES PERFORMANCE 30-70% IN EXISTING PDC DRILL BIT DESIGNS
Dan Scott, Anthony DiGiovanni, Nicholas Lyons, Derek Nelms – *Baker Hughes, USA*

RESEARCH & DEVELOPMENT

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IMPROVEMENTS TO THE REQUIREMENTS OF THE FRIABILITY TEST METHODS ARE SUGGESTED, NARROWING THE DEVIATION ON THE RESULTS
Philippe van Bogaert, CEO – *Bogimac nv-sa, Belgium*

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THE GLASS ROLLER CUTTER MADE OF CVD DIAMOND FILM
Hsiao-Kuo Chang – *National Cheng-Kung University, Taiwan,* **James C. Sung** – *KINIK Company, Taiwan,* **Ying-Kuo** – *National Taiwan University, Taiwan*

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PROPERTIES AND PERFORMANCE OF HPHT PROCESSED DIAMOND-SIC COMPOSITES
Thomas Easley, Senior Development Engineer – *Diamond Innovations, USA*

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CUTTING PERFORMANCE OF BINDERLESS PCD FOR HIGH-PRECISION MICROMACHINING
Takeru Nakashima, Chief Engineer – *Sumitomo Electric Hardmetal Corp., Japan*

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X-RAY TOMOGRAPHY OF DIAMOND SYNTHESIS CORES
Heiner Vollstädt, Professor, **Einar List** – *Vollstädt-Diamant GmbH, Germany,* **Felix Porsch** – *Fraunhofer, Germany*

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Dr. Ion Benea, Vice President Operation – *Hyprez Products,* **Benjamin R. Rosczyk, Laura M. Fitzgerald** – *Engis Corporation, USA*

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COMMERCIAL APPLICATIONS OF ELECTRICALLY CONDUCTIVE DIAMOND
Jerry Zimmer, CTO – *sp3 Diamond Technologies, USA*

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STATE OF THE ART CVD SYNTHETIC DIAMOND: A DRIVING FORCE FOR INNOVATIVE CHARACTERIZATION METHODS IN GEM LABS
Bert Willems, PhD – *HRD Antwerp, Belgium,* **Alexandre Tallaire, Jocelyn Achard** – *LSPM-CNRS, Université Paris, France*

STONE & CONCRETE

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IMPROVING THE LASER WELDING OF DRILL BITS
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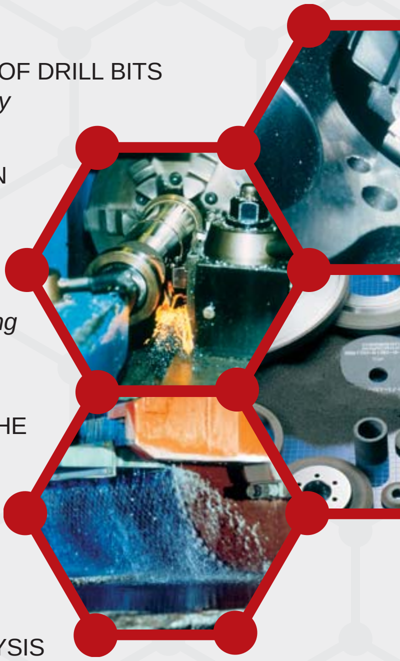

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DIAMOND WIRE CUTTING SLOTS IN DAMS TO RELIEVE CONCRETE STRESS DUE TO ALKALI-AGGREGATE REACTIVITY (AAR) IN CONCRETE
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DISCRETE SIMULATION FOR ANALYSIS OF DIAMOND SAWS FOR STONE PROCESSING
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THE DESIGN AND PERFORMANCE OF TRIZACT(TM) DIAMOND HX ABRASIVES FOR GRINDING AND POLISHING SINGLE-PHASE AND COMPOSITE CERAMIC SUBSTRATES IS DESCRIBED
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Janusz Konstanty, PhD, Thomas F. Stephenson, Dorota Tyrala – *AGH-University of Science & Technology, Poland*

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ARE HPHT DIAMONDS GOOD TOOL MATERIAL FOR PRECISION CUTTING?
John Wang, Associate Professor – *University of Nevada, USA*

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INCREASED PRODUCTIVITY IN THE CENTERLESS GRINDING OF PCD BUTTONS THROUGH A COMBINATION OF ADVANCED MACHINE TOOLS AND INNOVATIVE WHEEL TECHNOLOGIES
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TECHNOLOGY AND EQUIPMENT FOR THE MANUFACTURE OF DIAMOND GRINDING WHEELS OF THERMAL SPRAY COATING
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MATERIAL PROPERTY OF NEWLY DEVELOPED PCD MADE UP OF ELECTRICALLY CONDUCTIVE DIAMOND PARTICLES
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MICROSTRUCTURE CONTROL AND MECHANICAL PROPERTIES OF CUBIC BORON NITRIDE NANOCOMPOSITE
Hee-Sub Park – *ILJIN diamond Co. Ltd., Korea*

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CHINA'S DIAMOND IN THE WORLD MARKET
Li Zhihong, General Secretary – *IDA China, China*

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CONVERTING FROM CONVENTIONAL TO SUPERABRASIVES
Matt Huff, Product Specialist – *Cinetic Landis Corp. USA*

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SYSTEM COST REDUCTION IN TUNGSTEN CARBIDE INSERT GRINDING
Sridhar Kompella, Mesh Applications Technology Manager, **Kris Kumar** – *Diamond Innovations, USA*

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EFFECT OF COMPLEX GRINDING ASSISTED WITH EDM FOR ELECTRICALLY CONDUCTIVE PCD
Dr. Manabu Iwai, Associate Professor, **Shinichi Ninomiya, Kiyoshi Suzuki** – *Toyama Prefectural University, Japan*

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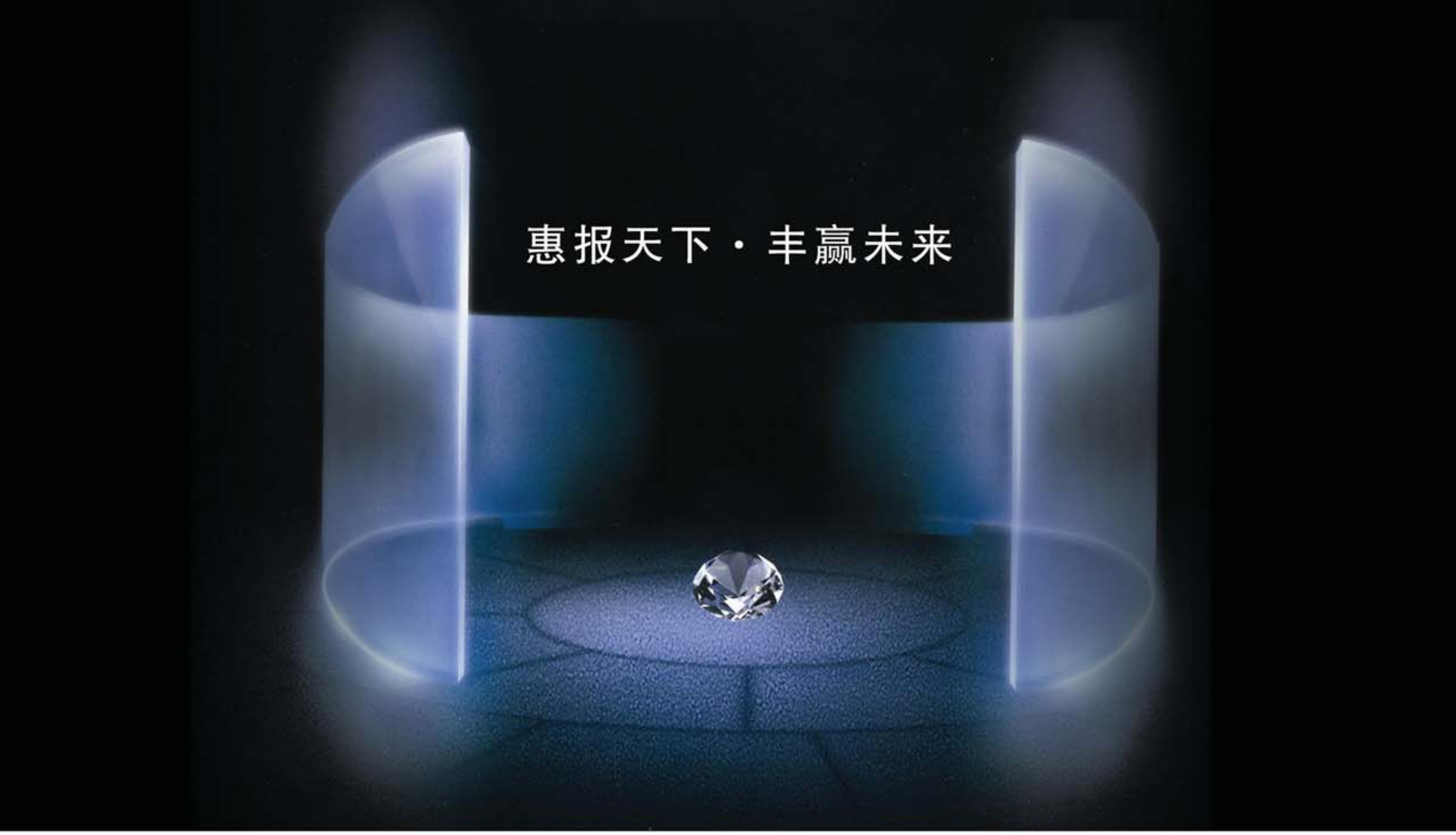

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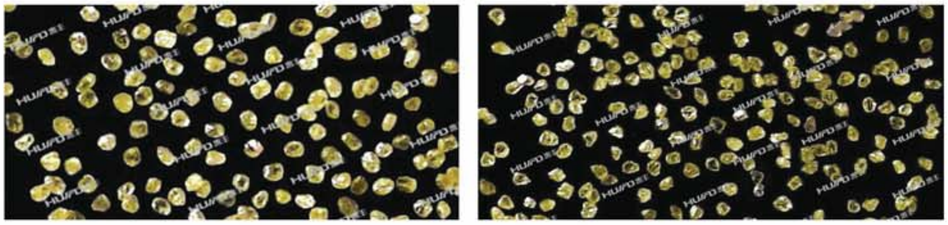

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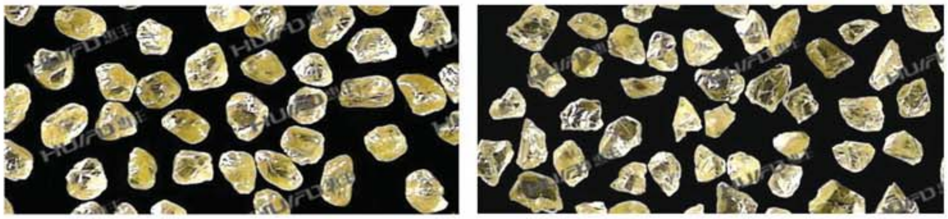

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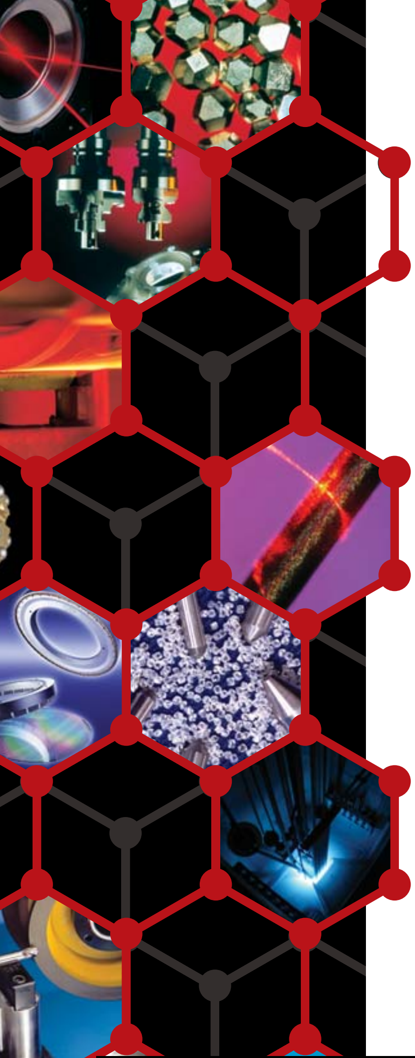

Educational Session at INTERTECH 2011 – Superabrasive Materials, Principles & Applications

Register today for the Educational Session at INTERTECH 2011 (See Registration Page 28)

For the first time an educational program on superabrasives will be introduced by the Industrial Diamond Association of America (IDA). Superabrasives are critical to all of industry due to their longevity, properties and characteristics. This program to be held on Tuesday, May 3 as a concurrent session at the **INTERTECH 2011** conference will be unlike any educational program ever offered by this industry.

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EDUCATION FOR A WIDE RANGE OF PEOPLE employed throughout the superabrasives industry. The IDA understands that manufacturing needs are paramount for productivity and performance. For an employee, all the way from an operator classification to an application development or manufacturing engineer to fully execute their job, they must understand all there is to know about superabrasives. If anyone is to increase their value to their employer they must have a complete understanding of their own particular job, plus a fundamental knowledge of the way their job fits in the overall scheme in the big picture.

CRITICAL NEED FOR PEOPLE TO FULLY UNDERSTAND THE CHARACTERISTICS OF SUPERABRASIVES as well as have an insight to the ways they are applied either as abrasives or nonabrasives. This session will be specifically structured to meet the needs of our industry and the end users industries we support though tooling and abrasives. The Educational Session will be a draw for an audience at many levels within the industry. Experienced people may use this as a refresher, while those new to the industry may find this session fills a requirement to understand the nuances across the whole spectrum of superabrasives. Now, machine operators, manufacturing supervisors, toolmakers, salesmen, engineers and others can obtain the basics of every aspect about superabrasives and their use.

HISTORY OF ABRASIVES BOTH CONVENTIONAL AND SUPERABRASIVES will be covered and how they evolved over the years. It will cover terms that are frequently used so everyone "speaks" the same language. The attendee will be able to see how various conventional abrasives and other methods such as Water jets, EDG, sound waves and lasers fit in the overall scheme of things in the manufacturing world. Then the session will go into the world of superabrasives and cover natural diamond, synthesized diamond, cubic boron nitride (cBN), polycrystallines and the new CVD Diamond and cBN. The approach will be to explain the very properties and characteristics of these superabrasives and also show why they are used in so many non-abrasive applications like prosthetics, wear parts, medical devices, laser windows, surgical knives and even as carriers of medicine at the nano range.

BASICS OF MACHINING AND GRINDING will be covered but with a detail to the "why's and wherefores" of the processes. What is a grinding wheel? How is it made? What determines its performance? Same thing with machining… What makes a cutting tool? How is it applied and what materials can be machined? There will be coverage given to the intricate part of an abrasive process, showing what is happening at the point of material removal. The attendee will gain a full understanding of the entire process… abrasives, tools, work piece materials, coolants and even the machine tools. An attendee won't just know that truing and dressing is required, they will learn why…

ADDED FEATURES - the course will cover any other abrasives and materials used from drill bits in oil & gas to sawblades and core bits in concrete and construction. An important portion will be coverage on the economics of superabrasives and the ways they can improve an operation through cost reduction.

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Another special feature of the **INTERTECH 2011** technical conference will be the inclusion of Technical/Product tabletop displays by participating companies. There will be a LIMITED number of spaces around the conference foyer and break area made available to companies that wish to exhibit.

Tabletops will be displayed at INTERTECH in the Foyer Area of Hyatt Regency O'Hare.

Due to the limited space, reservations can only be guaranteed when the completed form and payment are received at IDA Headquarters or completed on-line. Additional companies seeking space will be put on a waiting list as received.

PLEASE PRINT CLEARLY AND FILL IN COMPLETELY:

First Name: ______________________________ Last Name: ___________________________________

Title: ___________________________________ Company: ___________________________________

Address: ____

City: ___________________________________ State/Province: _____________________________

Zip/Postal Code: ___________________ Country: ____

Phone: ___________________________________ Fax: _______________________________________

Email: ____

FEE SCHEDULE

The fee for each tabletop space is $975.00 USD.

WHAT IS INCLUDED?

Exhibit space reservation fee will cover a single (6'x 2.5') draped table for placement of materials or exhibits. Any additional requirements for electricity, Internet connections, setup or drayage must be contracted with hotel services.

EXHIBIT PARAMETERS

Each display must be limited to the confines of the (6'x 2.5') tabletop with a **5 foot maximum height off the table** (ceiling height is only 8 feet). Large exhibits that stand on the floor are not allowed. No display may have loud music, audio or lighting that interferes with normal conversation, or is deemed problematic by conference management. No exhibit may have any flammable or hazardous materials, operating machinery or heavy equipment. Please direct any specific questions or concerns to IDA Headquarters – Telephone 614-797-2265,
Email: tkane-ida@insight.rr.com.

Please indicate your selections:

____ YES, I want to reserve a tabletop for my company's exhibit materials.

TOTAL AMOUNT ENCLOSED: $__________________

METHOD OF PAYMENT

Indicate the method of payment and fill in the credit card information, if applicable.

____ Pay by check, all checks must be paid in US funds and drawn on a U.S. bank - Payable to: Industrial Diamond Association of America

____ WIRE PAYMENT – Please contact IDA Headquarters by Fax: 614-797-2264 or email: tkane-ida@insight.rr.com to receive wire and bank information

CREDIT CARD:

____ VISA ____ MasterCard ____ American Express

Card Number: ____

Expiration Date: ___________ Name as it appears on card: ___________________________________

Credit Card Billing Address:

Name: ____ Title: _____________________________

Company: ____

Address: ____

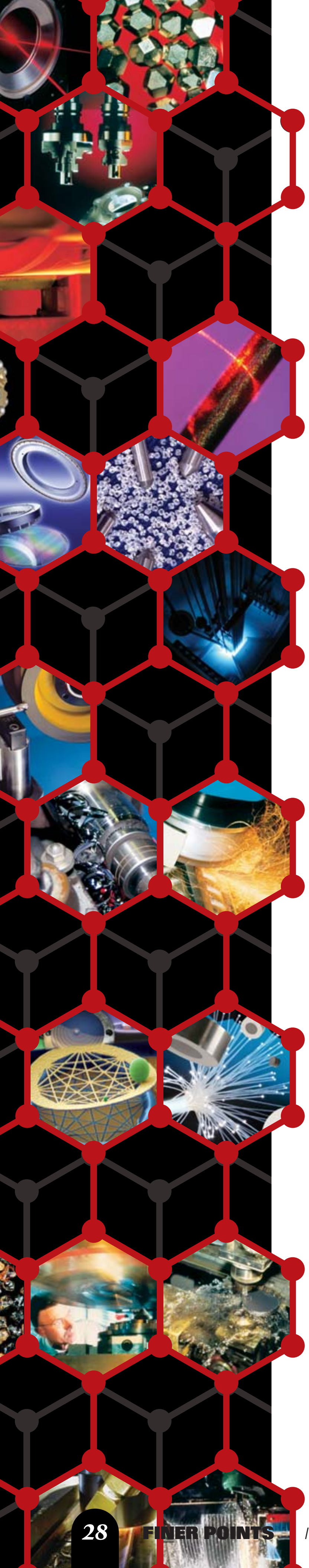
City: ______________________________________ State/Province: ___________________________

Zip/Postal Code: __________________________ Country: ________________________________

Email ____

EMAIL, FAX OR MAIL BOTH PAGES OF COMPLETED FORM TO:

INTERTECH 2011 Tabletop Reservations
P.O. Box 29460, Columbus, Ohio 43229 USA
Fax: 614-797-2264, Email: tkane-ida@insight.rr.com



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CHICAGO, ILLINOIS
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INTERTECH Conference Registration Form

Company: ______________________________

Address: ______________________________

City: ____________________ State: __________ Zip/Postal Code: ____________

Country: ______________ Phone: ______________ Fax: ______________

E-Mail: ______________________________

REGISTRATION FEE INCLUDES ACCESS TO ALL SESSIONS, EXHIBIT AREA, MEALS, WELCOME RECEPTION AND CONFERENCE PROGRAM CD.

Conference Attendees: $1295 USD. Early payment (before April 1, 2011) $1245 USD
IDA MEMBER Discount: $1195 USD. Early payment (before April 1, 2011) $1145 USD
Speakers/Presenters Discount - $995 USD. Early payment (before April 1, 2011) $945 USD

Name: ____________________ Title: __________ ☐ Attendee ☐ Speaker ☐ IDA Member

Name: ____________________ Title: __________ ☐ Attendee ☐ Speaker ☐ IDA Member

Name: ____________________ Title: __________ ☐ Attendee ☐ Speaker ☐ IDA Member

☐ **Student**, classified as those registered full time towards a degree. Must be accompanied by a signed letter from Department head attesting to student status - $795 USD

Student Name: ______________________________

☐ **Guest of a registered attendee** wishing to attend just the **Monday's Welcome Reception** on **May 2, - $125 USD**. Number of Guest Reservations __________

Spouse/Guest Name(s): ______________________________

☐ **OPTIONAL EDUCATION SESSION: A Person may attend JUST the Tuesday May 3, EDUCATIONAL SESSION, Fee - $325 USD (No other session or event Privileges)**

Name: ____________________ Title: __________

TOTAL __________ **USD**

Check the method of payment and fill in the credit card information, if applicable.
All checks must be paid in US funds and drawn on a U.S. bank.

☐ Check - Payable to: Industrial Diamond Association of America
☐ Wire Payment - Contact IDA Headquarters by email: tkane-ida@insight.rr.com or Fax: 614-797-2264 to receive banking transfer information.

☐ VISA ☐ MasterCard ☐ American Express

Card Number: ______________________________

Expiration Date: __________ Name as it appears on card: ____________________

Credit Card Billing Address:

Name As It Appears On Card: ______________________________

Company: ______________________________

Address: ______________________________

City: ____________________ State/Province: ____________________

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E-Mail: ______________________________

FAX OR MAIL COMPLETED FORM TO:
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OR REGISTER ON-LINE AT WWW.INTERTECHCONFERENCE.COM

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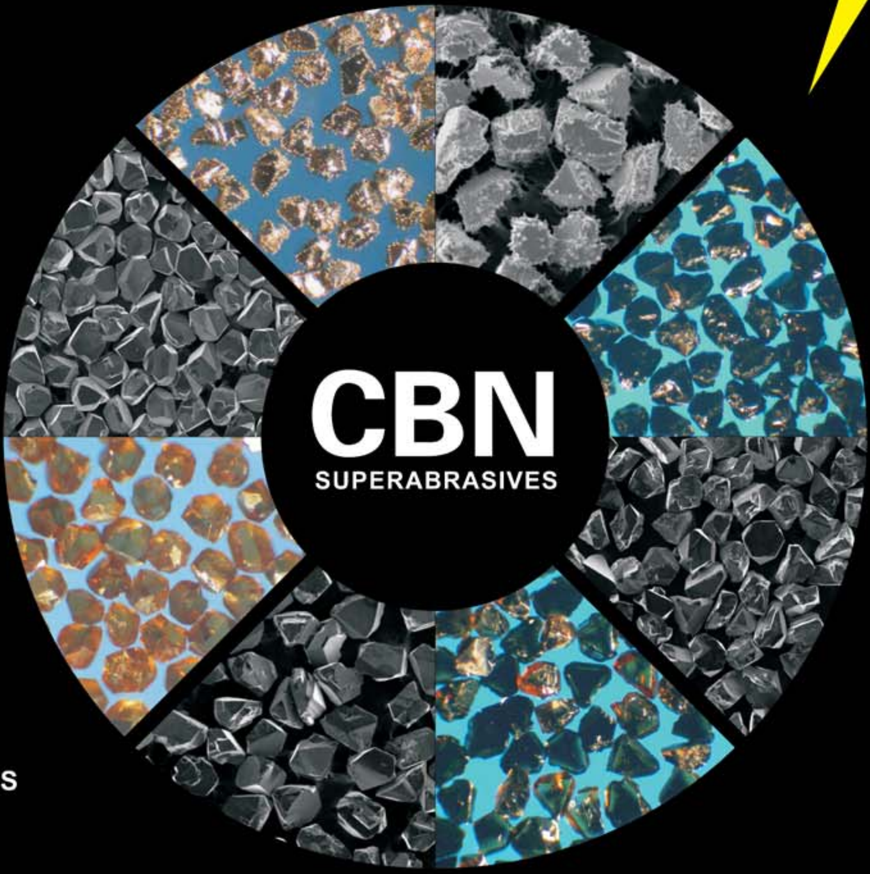

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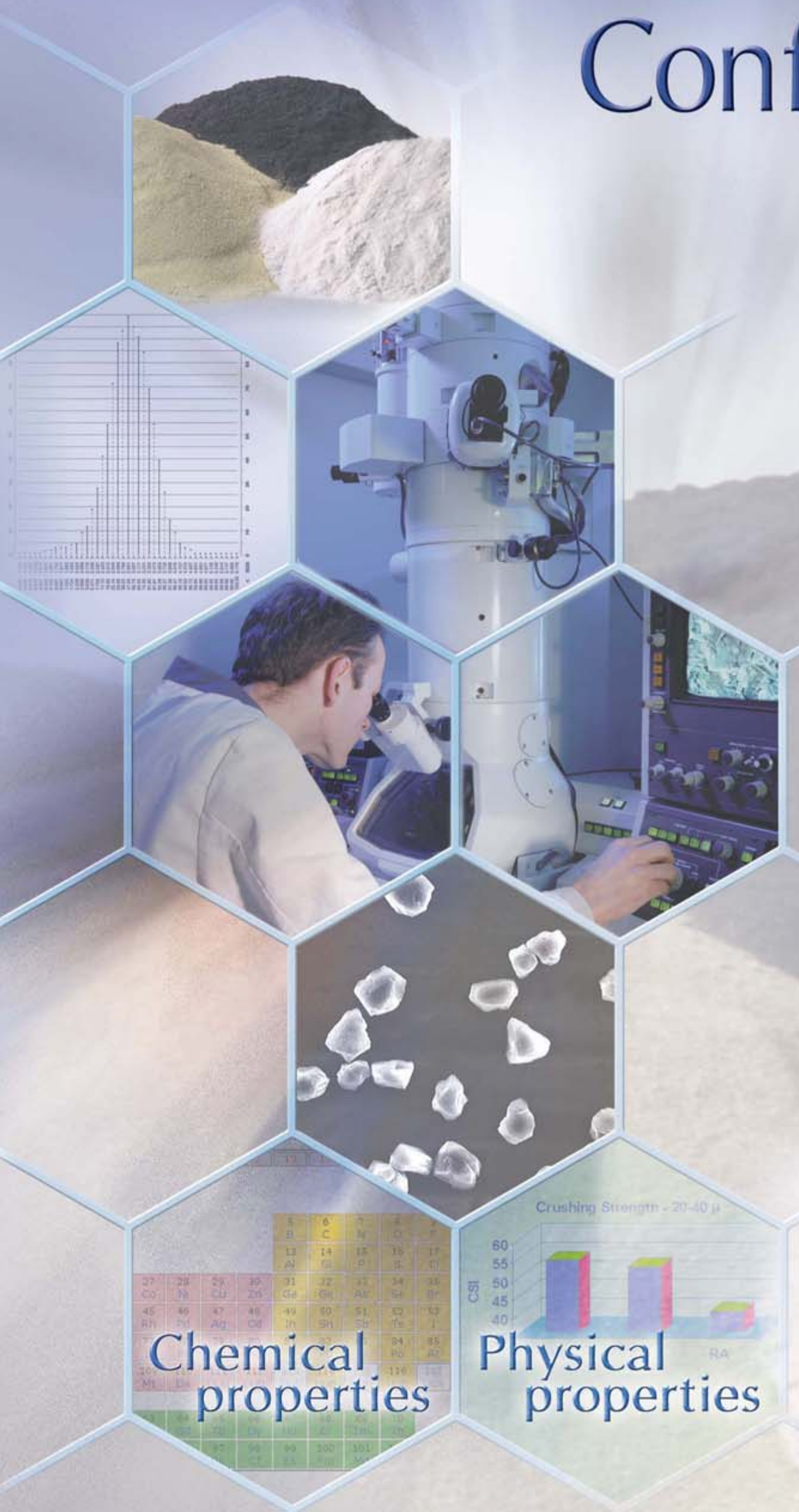

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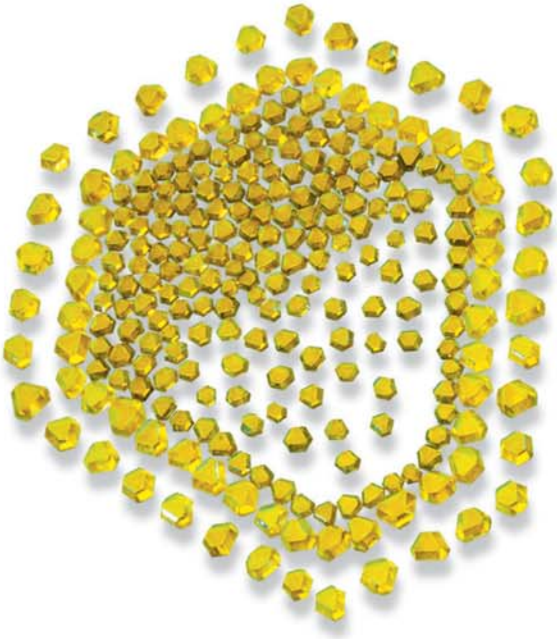

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